

PATENT ABSTRACTS OF JAPAN

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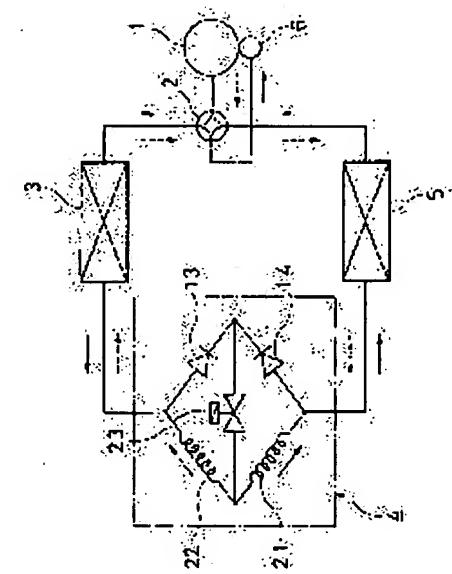
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(54) HEAT PUMP TYPE COOLING OR HEATING DEVICE

(57) Abstract:

PURPOSE: To simplify a piping work in a pressure reducing mechanism by a method wherein the first and second capillary tubes are connected in series, the first and second check valves are connected in parallel with the capillary tubes in an opposite direction and a solenoid valve is arranged in a bypassing pipe for use in connecting between the first and second capillary tubes and between the first and second check valves.

CONSTITUTION: In case of heating operation, a solenoid valve 25 is released, gaseous refrigerant of high pressure discharged from a compressor 1 is liquified with an indoor heat exchanger 3 through a four-way valve 2 and flowed to a pressure reducing mechanism 4. At this pressure reducing mechanism 4, the refrigerant passes from the first check valve 13 through a solenoid valve 25 and its pressure is reduced by the first capillary tube 21. The refrigerant of which



pressure is reduced is gasified with an outdoor heat exchanger 5, the refrigerant passes through the four-way valve 2 and is returned to the compressor 1. At this time, the first capillary tube 21 is adjusted in such a way as a flow rate of the refrigerant becomes the most suitable value. Then, in case of a low operating frequency, the solenoid valve 23 is closed to flow the refrigerant from the second capillary tube 22 to the capillary tube 21 and a sufficient pressure reduction is carried out.

LEGAL STATUS

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